

left ventricular ejection fraction following the administration of intracoronary streptokinase.²¹ In this context, the numbers of patients recruited to demonstrate a benefit in some of the cell therapy studies is surprising. Perhaps what is needed is the seemingly tautologous combination of a large multinational trial and detailed mechanistic benchwork. The large multinational trial will determine whether simply delivering some bone marrow down a coronary artery is of any benefit, while the mechanistic benchwork will enable a scientific basis for the inevitable iterative improvements that will be necessary once the trial results are revealed.

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REFERENCES

- Beltrami AP, Urbanek K, Kajstura J, et al. Evidence that human cardiac myocytes divide after myocardial infarction. *N Engl J Med* 2001;**344**:1750-7.
- Muller P, Pfeiffer P, Koglin J, et al. Cardiomyocytes of noncardiac origin in myocardial biopsies of human transplanted hearts. *Circulation* 2002;**106**:31-5.
- Orlic D, Kajstura J, Chimenti S, et al. Bone marrow cells regenerate infarcted myocardium. *Nature* 2001;**410**:701-5.
- Asahara T, Murohara T, Sullivan A, et al. Isolation of putative progenitor endothelial cells for angiogenesis. *Science* 1997;**275**:964-7.
- Marelli D, Desrosiers C, el-Alfy M, et al. Cell transplantation for myocardial repair: an experimental approach. *Cell Transplant* 1992;**1**:383-90.
- Dowell JD, Rubart M, Pasumarthi KBS, et al. Myocyte and myogenic stem cell transplantation in the heart. *Cardiovasc Res* 2003;**58**:336-50.
- Hutcheson KA, Atkins BZ, Hueman MT, et al. Comparison of benefits on myocardial performance of cellular cardiomyoplasty with skeletal myoblasts and fibroblasts. *Cell Transplant* 2000;**9**:359-68.
- Menasche P, Hagege AA, Vilquin JT, et al. Autologous skeletal myoblast transplantation for severe postinfarction left ventricular dysfunction. *J Am Coll Cardiol* 2003;**41**:1078-83.
- Hagege AA, Carrion C, Menasche P, et al. Viability and differentiation of autologous skeletal myoblast grafts in ischaemic cardiomyopathy. *Lancet* 2003;**361**:491-2.
- Strauer BE, Brehm M, Zeus T, et al. Repair of infarcted myocardium by autologous intracoronary mononuclear bone marrow cell transplantation in humans. *Circulation* 2002;**106**:1913-8.
- Assmus B, Schachinger V, Teupe C, et al. Transplantation of progenitor cells and regeneration enhancement in acute myocardial infarction (TOPCARE-AMI). *Circulation* 2002;**106**:3009-17.
- Wollert KC, Meyer GP, Lotz J, et al. Intracoronary autologous bone-marrow cell transfer after myocardial infarction: the BOOST randomised controlled clinical trial. *Lancet* 2004;**364**:141-8.
- Kang HJ, Kim HS, Zhang SY, et al. Effects of intracoronary infusion of peripheral blood stem-cells mobilised with granulocyte-colony stimulating factor on left ventricular systolic function and restenosis after coronary stenting in myocardial infarction: the MAGIC cell randomised clinical trial. *Lancet* 2004;**363**:751-6.
- Hill JM, Syed MA, Arai AE, et al. Outcomes and risks of granulocyte colony-stimulating factor in patients with coronary artery disease. *J Am Coll Cardiol* 2005;**46**:1643-8.
- Chen SI, Fang Ww, Ye F, et al. Effect on left ventricular function of intracoronary transplantation of autologous bone marrow mesenchymal stem cell in patients with acute myocardial infarction. *Am J Cardiol* 2004;**94**:92-5.
- Janssens S, Dubois C, Bogaert J, et al. Autologous bone marrow-derived stem-cell transfer in patients with ST-segment elevation myocardial infarction: double-blind, randomised controlled trial. *Lancet*, **367**:113-21.
- Ge J, Li Y, Qian J, et al. Efficacy of emergent transcatheter transplantation of stem cells for treatment of acute myocardial infarction (TCT-STAMI). *Heart* 2006;**92**:1764-7.
- Baks T, van Geuns RJ, Biagini E, et al. Effects of primary angioplasty for acute myocardial infarction on early and late infarct size and left ventricular wall characteristics. *J Am Coll Cardiol* 2006;**47**:40-4.
- Inglanisorn WP, Rhoads KL, Aletras AH, et al. Gadolinium delayed enhancement cardiovascular magnetic resonance correlates with clinical measures of myocardial infarction. *J Am Coll Cardiol* 2004;**43**:2253-9.
- Lunde K, Solheim S, Aakhus S, et al. Effects on left ventricular function by intracoronary injections of autologous mononuclear bone marrow cells in acute anterior wall myocardial infarction: the ASTAMI randomized controlled trial. *Circulation* 2005;**112**:3364.
- Smalling RW, Fuentes F, Matthews MW, et al. Sustained improvement in left ventricular function and mortality by intracoronary streptokinase administration during evolving myocardial infarction. *Circulation* 1983;**68**:131-8.

STAMPS IN CARDIOLOGY

Japanese metal engraving

An unusual philatelic item from Japan is illustrated. The booklet contains the 1972 Japanese stamp for the World Health Organization (WHO) heart campaign of that year with a fine cancellation incorporating the heart (as a similar design to that seen in the stamp) and the WHO logo alongside. The stamp was designed by Masatoshi Hioki. The booklet also contains a metal engraving of the stamp drawings by Hosei Hotta. The text reads "As foundation work, metal engraving of the drawings is done by Hosei Hotta. Then, thick-plating, colouring with various kinds of precious metals, and finishing hand-work are performed".

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